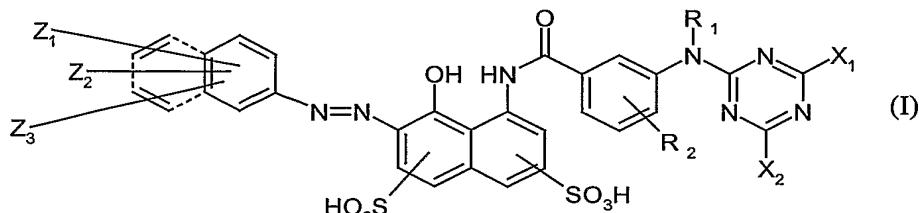


**CLAIMS**

## 1. A dyestuff of formula (I)



5

wherein

R<sub>1</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; phenyl or substituted phenyl,R<sub>2</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; -COOH; -COOCH<sub>3</sub>; -CF<sub>3</sub>;  
-SO<sub>3</sub>H, -CN or SO<sub>2</sub>NHR<sub>6</sub>,10 where R<sub>6</sub> is H, C<sub>1-4</sub> Alkyl, phenyl or substituted phenyl

and

X<sub>1</sub> is NR<sub>3</sub>R<sub>4</sub>; SR<sub>5</sub>; OH;X<sub>2</sub> is NR<sub>3</sub>R<sub>4</sub>; SR<sub>5</sub>; OH;

15 wherein

R<sub>3</sub> is H, C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; substituted phenyl,  
naphthyl or substituted naphthylR<sub>4</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; substituted phenyl,  
naphthyl or substituted naphthyl20 or R<sub>3</sub> and R<sub>4</sub> form 5- or 6-membered ring containing one or two hetero atoms, in  
addition to N, O or S, which heterocyclic ring is unsubstituted or  
substituted by one or two C<sub>1-4</sub>alkyl groupsR<sub>5</sub> is C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; phenyl or substituted phenyland X<sub>1</sub> has not the meaning of X<sub>2</sub> unless X<sub>1</sub> or X<sub>2</sub> signifies SR<sub>5</sub> or OH;

25 and

Z<sub>1</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; -OH; -COOH; -COOCH<sub>3</sub>; -  
CF<sub>3</sub>; -SO<sub>3</sub>H; amino; alkylamino, -CN or SO<sub>2</sub>NHR'<sub>6</sub>,  
where R'<sub>6</sub> is H, C<sub>1-4</sub> alkyl, phenyl or substituted phenylZ<sub>2</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; OH; COOH; -SO<sub>3</sub>H

$Z_3$  is H, C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy ; OH; COOH; -SO<sub>3</sub>H as free acid or in salt form, as well as mixtures thereof.

2. A dyestuff according to claim 1 characterized in that

R<sub>1</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl,

R<sub>2</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; -COOH or -SO<sub>3</sub>H

and

5 X<sub>1</sub> is NR<sub>3</sub>R<sub>4</sub>; SR<sub>5</sub>; OH;

X<sub>2</sub> is NR<sub>3</sub>R<sub>4</sub>; SR<sub>5</sub>; OH;

wherein

R<sub>3</sub> is H, C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; phenyl or substituted phenyl, naphthyl or substituted naphthyl

10 R<sub>4</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; phenyl or substituted phenyl, naphthyl or substituted naphthyl or

R<sub>3</sub> and R<sub>4</sub> form a 5- or 6-membered ring containing one or two hetero atoms, in addition to N, O or S, which heterocyclic ring is unsubstituted or substituted by one or two C<sub>1-4</sub>alkyl groups

15 R<sub>5</sub> is C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; phenyl or substituted phenyl

and X<sub>1</sub> has not the meaning of X<sub>2</sub> unless X<sub>1</sub> or X<sub>2</sub> signifies SR<sub>5</sub> or OH;

and

Z<sub>1</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; -OH; -COOH; -COOCH<sub>3</sub>; -CF<sub>3</sub>; -SO<sub>3</sub>H; amino; alkylamino, -CN or SO<sub>2</sub>NHR'<sub>6</sub>,

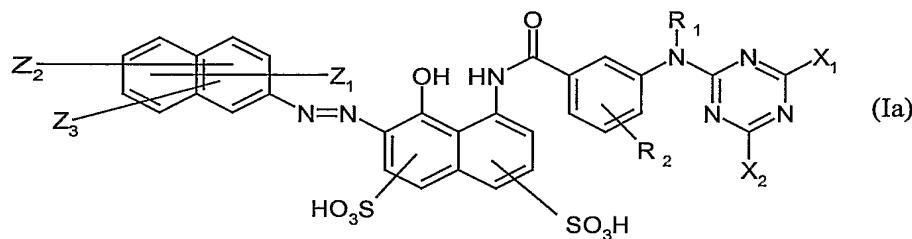
20 where R'<sub>6</sub> is H, C<sub>1-4</sub>alkyl, phenyl or substituted phenyl

Z<sub>2</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; OH; COOH; -SO<sub>3</sub>H

Z<sub>3</sub> is H, C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; OH; COOH; -SO<sub>3</sub>H

as free acid or in salt form, as well as mixtures thereof

25 3. A dyestuff according to claim 2 characterized by the formula (Ia)



wherein

R<sub>1</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl,

R<sub>2</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; -COOH or -SO<sub>3</sub>H

and

$X_1$  is  $NR_3R_4$ ;  $SR_5$ ;  $OH$ ;

$X_2$  is  $NR_3R_4$ ;  $SR_5$ ;  $OH$ ;

wherein

5       $R_3$  is  $H$ ,  $C_{1-4}$ alkyl; substituted  $C_{1-4}$ alkyl; phenyl or substituted phenyl, naphthyl or substituted naphthyl

10      $R_4$  is  $H$ ;  $C_{1-4}$ alkyl; substituted  $C_{1-4}$ alkyl; phenyl or substituted phenyl, naphthyl or substituted naphthyl or

15      $R_3$  and  $R_4$  form a 5- or 6-membered ring containing one or two hetero atoms, in addition to  $N$ ,  $O$  or  $S$ , which heterocyclic ring is unsubstituted or substituted by one or two  $C_{1-4}$ alkyl groups

20      $R_5$  is  $C_{1-4}$ alkyl; substituted  $C_{1-4}$ alkyl; phenyl or substituted phenyl and  $X_1$  has not the meaning of  $X_2$  unless  $X_1$  or  $X_2$  signifies  $SR_5$  or  $OH$ ;

and

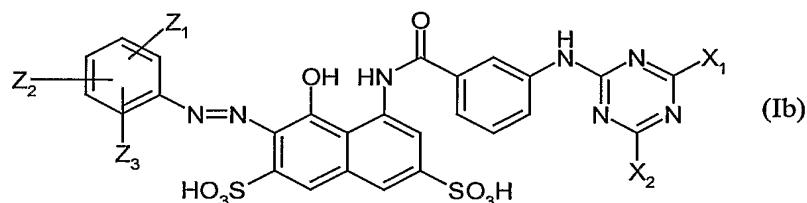
25      $Z_1$  is  $H$ ;  $C_{1-4}$ alkyl; substituted  $C_{1-4}$ alkyl;  $C_{1-4}$ alkoxy;  $-OH$ ;  $-COOH$ ;  $-COOCH_3$ ;  $-CF_3$ ;  $-SO_3H$ ; amino; alkylamino,  $-CN$  or  $SO_2NHR'_6$ , where  $R'_6$  is  $H$ ,  $C_{1-4}$  alkyl, phenyl or substituted phenyl

20      $Z_2$  is  $H$ ;  $C_{1-4}$ alkyl; substituted  $C_{1-4}$ alkyl;  $C_{1-4}$ alkoxy;  $OH$ ;  $COOH$ ;  $-SO_3H$

20      $Z_3$  is  $H$ ,  $C_{1-4}$ alkyl; substituted  $C_{1-4}$ alkyl;  $C_{1-4}$ alkoxy;  $OH$ ;  $COOH$ ;  $-SO_3H$

20     as free acid or in salt form, as well as mixtures thereof

**4. A dyestuff according to claim 2 characterized by the formula (Ib)**



wherein

25      $R_1$  is  $H$ ;  $C_{1-4}$ alkyl; substituted  $C_{1-4}$ alkyl,

25      $R_2$  is  $H$ ;  $C_{1-4}$ alkyl; substituted  $C_{1-4}$ alkyl;  $C_{1-4}$ alkoxy;  $-COOH$  or  $-SO_3H$

and

$X_1$  is  $NR_3R_4$ ;  $SR_5$ ;  $OH$ ;

$X_2$  is  $NR_3R_4$ ;  $SR_5$ ;  $OH$ ;

30     wherein

R<sub>3</sub> is H, C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; phenyl or substituted phenyl, naphthyl or substituted naphthyl

R<sub>4</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; phenyl or substituted phenyl, naphthyl or substituted naphthyl or

5 R<sub>3</sub> and R<sub>4</sub> form a 5- or 6-membered ring containing one or two hetero atoms, in addition to N, O or S, which heterocyclic ring is unsubstituted or substituted by one or two C<sub>1-4</sub>alkyl groups

R<sub>5</sub> is C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; phenyl or substituted phenyl and X<sub>1</sub> has not the meaning of X<sub>2</sub> unless X<sub>1</sub> or X<sub>2</sub> signifies SR<sub>5</sub> or OH;

10 and

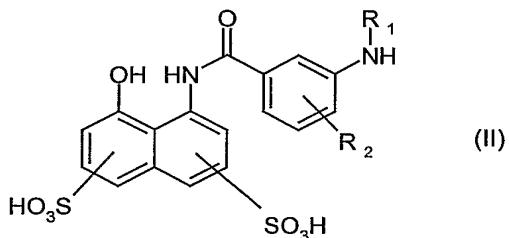
Z<sub>1</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; -OH; -COOH; -COOCH<sub>3</sub>; -CF<sub>3</sub>; -SO<sub>3</sub>H; amino; alkylamino, -CN or SO<sub>2</sub>NHR'<sub>6</sub>, where R'<sub>6</sub> is H, C<sub>1-4</sub> alkyl, phenyl or substituted phenyl

Z<sub>2</sub> is H; C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; OH; COOH; -SO<sub>3</sub>H

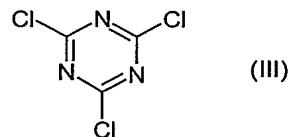
15 Z<sub>3</sub> is H, C<sub>1-4</sub>alkyl; substituted C<sub>1-4</sub>alkyl; C<sub>1-4</sub>alkoxy; OH; COOH; -SO<sub>3</sub>H as free acid or in salt form, as well as mixtures thereof

5. A process for the preparation of a compound according to the formula (I)

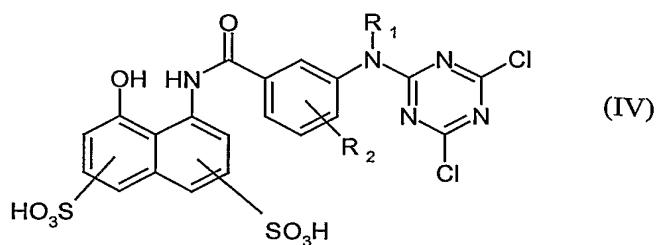
20 characterized in that in a first step a compound of formula (II)



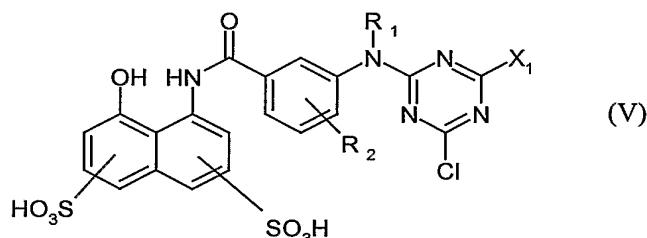
wherein all substituents have the meanings as defined above is reacted with a compound of formula (III)



25 leading to compounds according to formula (IV)

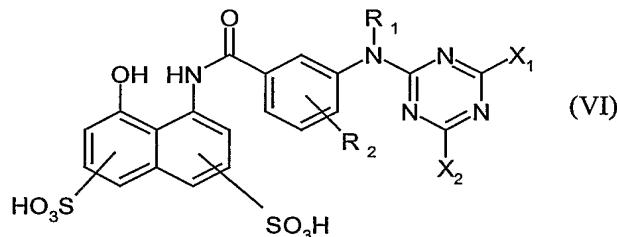


and in a second step the product of formula (IV) is reacted with one part of a compound of formula  $HX_1$  wherein  $X_1$  has the formula as described above which leads to compound of formula (V)

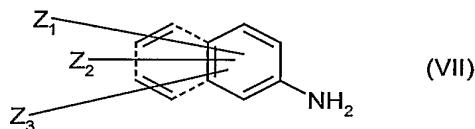


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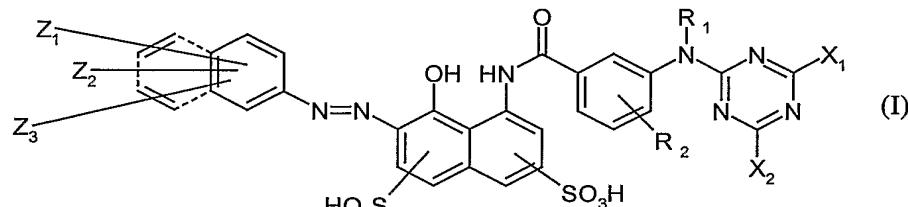
and in a third step the compound of formula (V) is condensated with a compound of formula  $HX_2$  wherein  $X_2$  has the formula as described above leading to compound of formula (VI)



10 wherein substituents  $R_1$  and  $R_2$  have the same meanings as defined above and in a final step a compound of formula (VI) is coupled with the diazoniumsalt of a compound of formula (VII)



leading to the dyestuff of formula (I)



wherein all substituents have the same meanings as defined above.

6. An Ink Jet Ink comprising at least one compound according to claim 1 or 2 or 3 or  
5 4.

7. An Ink Jet Ink according to Claims 6 characterized in that the total content of salts  
is less than 0.5% by weight, based on the total weight of the dyes.

10

8. Use of compounds according to claim 1 or 2 or 3 or 4 for printing recording  
material and/or in an inkjet printing process for printing recording materials  
and/or dyeing substrates comprising cellulose.

15

9. Use according to claim 8 characterized in that the recording material is paper or a  
papery substrate.

20

10. A recording material or a papery substrate or substrates comprising cellulose  
printed or dyed with a compound according to claim 1 or 2 or 3 or 4.